

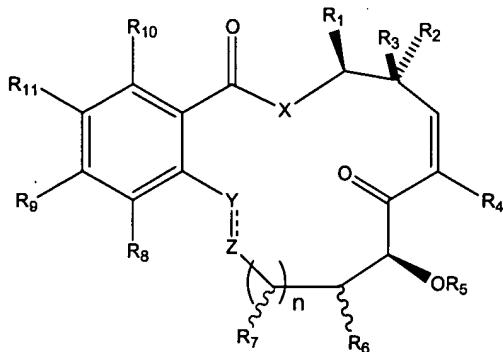
AMENDMENTS TO THE CLAIMS

The Examiner is directed to the International Preliminary Examination Report (IPER) issued June 29, 2004 in which it is reported that Applicant's amendments to the claims filed on December 15, 2003 and April 28, 2004 under PCT Article 34 have been entered. For the convenience of the Examiner, copies of the December 15, 2003 and April 28, 2004 Amendments and the IPER are enclosed herewith, as Appendices B, C and D, respectively.

Currently amended claims 1, 37, 84 and 123 take into account amendments made in the Article 34 Amendments filed December 15, 2003 and April 28, 2004.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A compound having the structure:



(I)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein **R₁** is hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl;

R₂ and **R₃** are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, or an aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl moiety; or

R₁ and **R₂**, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms; or

R₁ and R₃, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms;

R₄ is hydrogen or halogen;

R₅ is hydrogen, an oxygen protecting group or a prodrug moiety;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or an aliphatic moiety optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl; or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is -(C=O)NHR₁₅ -(C=O)OR₁₅, or -(C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl; or R₁₄ is -SO₂(R₁₆), wherein R₁₆ is an aliphatic moiety, wherein one or more of R₁₄, R₁₅, or R₁₆ are optionally substituted with one or more occurrences of hydroxyl,

protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R₈ and R₉ may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R₁₀ is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R₁₁ is hydrogen, hydroxyl or protected hydroxyl;

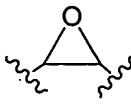
X is absent or is O, NH, N-alkyl, CH₂ or S;

Y is CHR₁₇, O, C=O, CR₁₇ or NR₁₇; and Z is CHR₁₈, O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R₁₇ and R₁₈ is independently hydrogen or aliphatic, or R₁₇ and R₁₈ taken together is -O-, -CH₂- or -NR₁₉-, wherein R₁₉ is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond;

with the proviso that when n is 1; X is O; R₁ is methyl; R₂, R₃, R₇ and R₁₁ are each hydrogen; R₅ is hydrogen, C₁₋₄alkyl or -C(=O)C₁₋₄alkyl; R₆ is hydrogen, OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; and R₉ is OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; then one or more if the following groups do not occur simultaneously as defined:

(i) R₄ is hydrogen; R₁₀ and R₈ are independently OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; and Y-Z is -CH₂CH₂- or -CH=CH-;

(ii) R₄ and R₈ are each hydrogen; R₁₀ is OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; and

Y-Z is -CHR^YCHR^Z-, -CH=CH- or ; wherein R^Y and R^Z are independently hydrogen, C₁₋₄alkyl or C₁₋₄alkanoyl; and

(iii) R₄ and R₁₀ are each hydrogen, OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; R₈ is hydrogen, OH, halogen, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; and Y-Z is -CH₂CH₂-, -CH=CH- or -C(=O)CH₂-.

2. **(Original)** The compound of claim 1, where the following groups do not occur simultaneously as defined:

X is oxygen,

R₁ is methyl,

R₂ and R₃ are each hydrogen,

R₄ is hydrogen,

R₅ is hydrogen, C₁₋₆alkyl or C₁₋₆alkanoyl,

R₆ is OR', where R' is hydrogen, C₁₋₆alkyl or C₁₋₆alkanoyl with S-configuration,

R₇ is hydrogen,

Y and Z together represent -CHR₁₇-CHR₁₈-or -CR₁₇=CR₁₈-, wherein R₁₇ and R₁₈ are independently hydrogen, or when Y and Z are -CHR₁₇-CHR₁₈, R₁₇ and R₁₈ taken together are -O-;

R₈ is hydrogen or OR', where R' is hydrogen, C₁₋₆alkyl or C₁₋₆alkanoyl,

R₉ is OR', where R' is hydrogen, C₁₋₆alkyl or C₁₋₆alkanoyl,

R₁₀ is OR", where R" is hydrogen, C₁₋₆alkyl or C₁₋₆alkanoyl; and

R¹¹ is hydrogen.

3. **(Original)** The compound of claim 1, wherein:

R₁ is hydrogen, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl;

R₂ and R₃ are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl; or

R₁ and R₂, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen; or

R₁ and R₃, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen;

R₄ is hydrogen or halogen;

R₅ is hydrogen or a protecting group;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, C₁₋₆alkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is -(C=O)NHR₁₅ -(C=O)OR₁₅, or -(C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or R₁₄ is -SO₂(R₁₆), wherein R₁₆ is an alkyl moiety, wherein one or more of R₁₄, R₁₅, or R₁₆ are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R_8 and R_9 may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

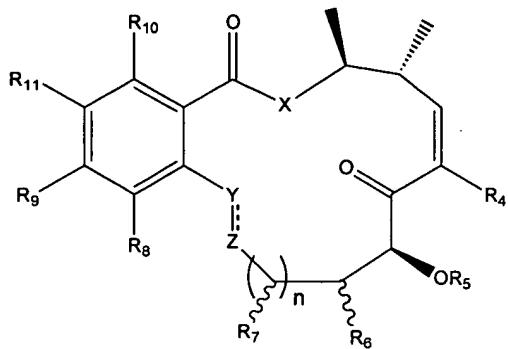
R_{10} is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R_{11} is hydrogen, hydroxyl or protected hydroxyl;

X is absent or is O, NH, N-alkyl, CH_2 or S;

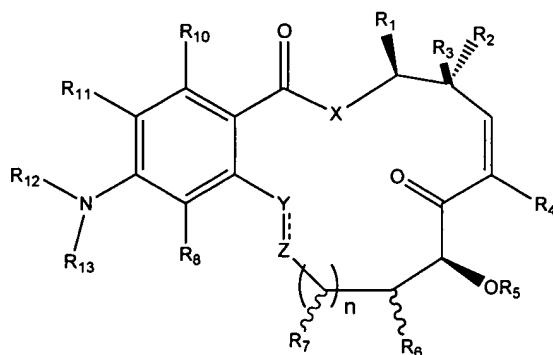
Y is CHR_{17} , O, C=O, CR_{17} or NR_{17} ; and Z is CHR_{18} , O, C=O, CR_{18} or NR_{18} , wherein each occurrence of R_{17} and R_{18} is independently hydrogen or C_{1-6} alkyl, or R_{17} and R_{18} taken together is $-O-$, $-CH_2-$ or $-NR_{19}-$, wherein R_{19} is hydrogen or C_{1-6} alkyl, and Y and Z may be connected by a single or double bond.

4. **(Original)** The compound of claim 3, where X is oxygen and n is 1.
5. **(Original)** The compound of claim 3, where R_4 is halogen.
6. **(Original)** The compound of claim 3, where R_4 is fluorine.
7. **(Original)** The compound of claim 3, where Y and Z together represent- $CH=CH-$.
8. **(Original)** The compound of claim 3, where Y and Z together represent trans- $-CH=CH-$.
9. **(Original)** The compound of claim 3, wherein R_1 and R_2 are each methyl and R_3 is hydrogen and the compound has the structure:



wherein R₄-R₁₁, n, X, Y and Z are as defined in claim 3.

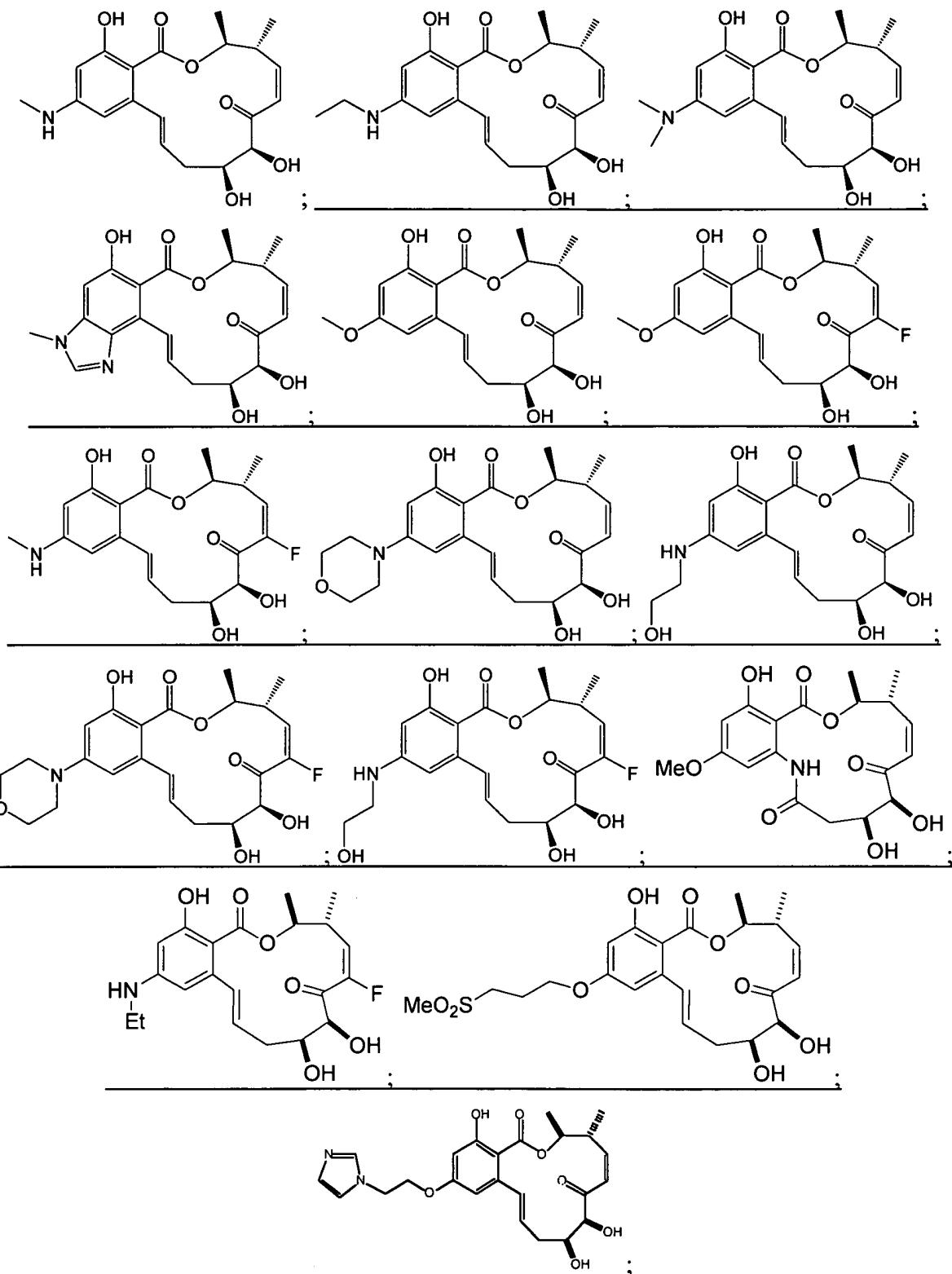
10. **(Original)** The compound of claim 9, wherein X is oxygen and n is 1.
11. **(Original)** The compound of claim 9, wherein R₄ is halogen.
12. **(Original)** The compound of claim 9, wherein Y and Z together represent -CH=CH-.
13. **(Original)** The compound of claim 9, wherein X is oxygen, n is 1, R₄ is halogen and Y and Z together represent -CH=CH-.
14. **(Original)** The compound of claim 12 or 13 wherein -CH=CH- is trans.
15. **(Original)** The compound of claim 3, wherein R₉ is NR₁₂R₁₃ and the compound has the structure:



wherein R₁-R₁₂, n, X, Y and Z are as defined in claim 3, or

R₁₃ and R₈ may, when taken together, form a cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydrogen, alkyloxy, amino, alkylamino, aminoalkyl, and halogen.

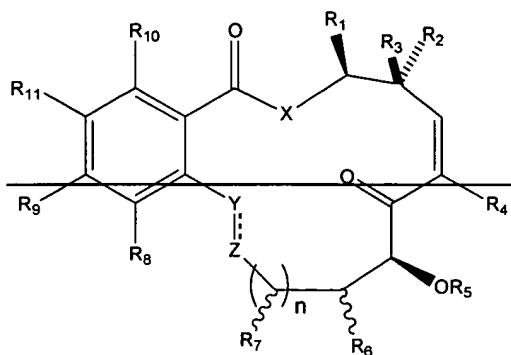
16. **(Original)** The compound of claim 15, wherein X is oxygen and n is 1.
17. **(Original)** The compound of claim 15, wherein R₄ is halogen.
18. **(Original)** The compound of claim 15, wherein Y and Z together represent -CH=CH-.
19. **(Original)** The compound of claim 15, wherein R₁ and R₂ are each methyl and R₃ is hydrogen.
20. **(Original)** The compound of claim 15, wherein X is oxygen, n is 1, R₁ and R₂ are each methyl, R₃ is hydrogen, R₄ is halogen, and Y and Z together represent -CH=CH-.
21. **(Original)** The compound of claim 18 or 20, wherein -CH=CH- is trans.
22. **(Currently Amended)** A compound having the structure: The compound of claim 1 having the structure:



or pharmaceutically acceptable salt, ester, or salt of ester thereof.

Claims 23-36 (Canceled)

37. (Currently Amended) A pharmaceutical composition comprising:
a compound having the structure: of any one of claims 1, 9 and 15;



(4)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein ~~R₁ is hydrogen, aliphatic, heteroaliphatic, alicyclic, heterocyclic, aryl or heteroaryl;~~

~~R₂ and R₃ are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, or an aliphatic, heteroaliphatic, alicyclic, heterocyclic, aryl or heteroaryl moiety; or~~

~~R₄ and R₂, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms; or~~

~~R₄ and R₃, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms;~~

~~R₄ is hydrogen or halogen;~~

~~R₅ is hydrogen, an oxygen protecting group or a prodrug moiety;~~

~~R₆ is hydrogen, hydroxyl, or protected hydroxyl;~~

~~n is 0-2;~~

~~R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;~~

~~R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or an aliphatic moiety optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;~~

~~R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, X₁(CH₂)_pX₂R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or X₁(CH₂)_pX₂R₁₄;~~

~~wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,~~

~~wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or N(alkyl), or wherein X₂R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,~~

~~p is 2-10, and~~

~~R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is (C=O)NHR₁₅, (C=O)OR₁₅, or (C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl, or R₁₄ is SO₂(R₁₆), wherein R₁₆ is an aliphatic moiety, wherein one or more of R₁₄, R₁₅, or R₁₆ are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or~~

~~R₈ and R₉ may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;~~

~~R₁₀ is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;~~

~~R₁₁ is hydrogen, hydroxyl or protected hydroxyl;~~

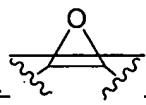
~~X is absent or is O, NH, N alkyl, CH₂ or S;~~

~~Y is CHR₁₇, O, C=O, CR₁₇ or NR₁₇; and Z is CHR₁₈, O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R₁₇ and R₁₈ is independently hydrogen or aliphatic, or R₁₇ and R₁₈ taken together is O, CH₂ or NR₁₉, wherein R₁₉ is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond; and~~

a pharmaceutically acceptable carrier, carrier.

with the proviso that when n is 1; X is O, R₄ is methyl; R₂, R₃, R₇ and R₁₄ are each hydrogen; R₅ is hydrogen, C₁₋₄alkyl or C(=O)C₁₋₄alkyl; R₆ is hydrogen, OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and R₉ is OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; then one or more if the following groups do not occur simultaneously as defined:

- (i) R₄ is hydrogen; R₁₀ and R₈ are independently OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y Z is CH₂CH₂ or CH=CH;
- (ii) R₄ and R₈ are each hydrogen; R₁₀ is OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y

Z is ~~CHR^XCHR^Z, CH=CH or~~ ; wherein R^X and R^Z are independently hydrogen, C₁₋₄alkyl or C₁₋₄alkanoyl; and

- (iii) R₄ and R₁₀ are each hydrogen, OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; R₈ is hydrogen, OH, halogen, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y Z is CH₂CH₂, CH=CH or C(=O)CH₂.

38. (Original) The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to inhibit NF-κB activation.

39. (Original) The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to inhibit AP-1 activation.

40. (Original) The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to inhibit a protein kinase.

41. **(Currently Amended)** The pharmaceutical composition of ~~claim 39~~ claim 40, wherein the protein kinase is MEKK1, MEK1, VEGFr or PDGFr.

42. **(Original)** The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to inhibit proliferation of cancerous cells and angiogenesis on solid tumors.

43. **(Original)** The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to have an anti-inflammatory effect.

44. **(Original)** The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to treat psoriasis.

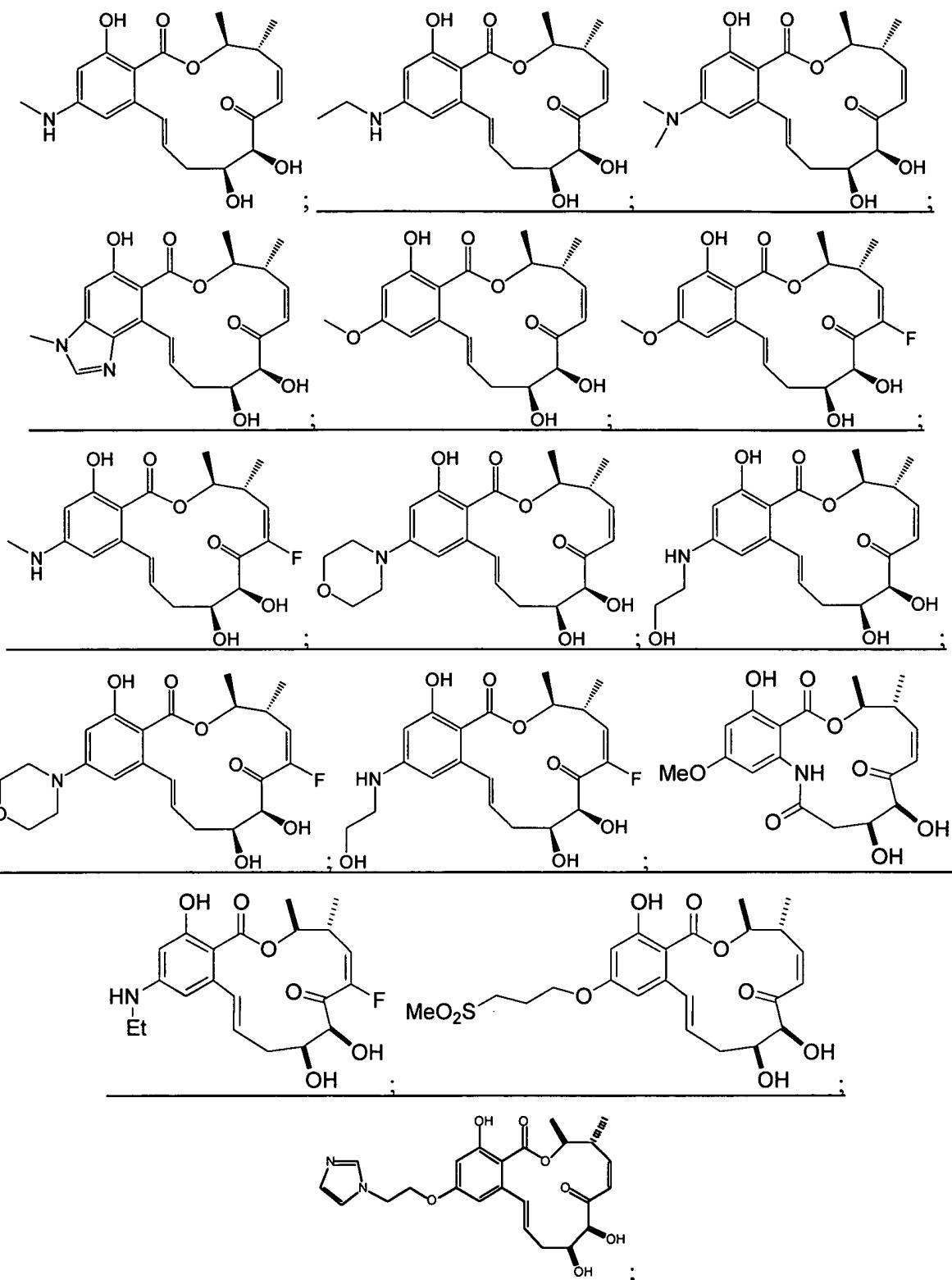
45. **(Original)** The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to reduce skin photodamage.

46. **(Original)** The pharmaceutical composition of claim 37, wherein the compound is present in an amount effective to prevent restenosis.

Claims 47-65 (Canceled)

66. **(Currently Amended)** ~~A pharmaceutical composition comprising:~~ The pharmaceutical composition of claim 37 wherein the compound has the structure:

~~a compound having the structure:~~

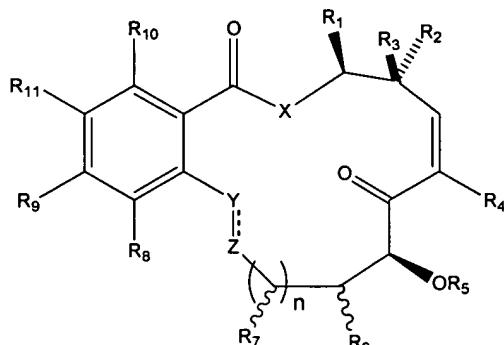


or pharmaceutically acceptable salt, ester, or salt of ester thereof; and
~~a pharmaceutically acceptable carrier.~~

Claims 67-80 (Canceled)

81. **(Currently Amended)** A topical pharmaceutical composition for preventing or treating UVB-induced photodamage comprising:

a compound having the structure:



(I)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein R₁ is hydrogen, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl;

R₂ and R₃ are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl; or

R₁ and R₂, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen; or

R₁ and R₃, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen;

R₄ is hydrogen or halogen;

R₅ is ~~hydrogen or a protecting group~~ hydrogen, an oxygen protecting group or a prodrug moiety;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, C₁₋₆alkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is -(C=O)NHR₁₅ -(C=O)OR₁₅, or -(C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or R₁₄ is -SO₂(R₁₆), wherein R₁₆ is an alkyl moiety, wherein one or more of R₁₄, R₁₅, or

R_{16} are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R_8 and R_9 may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R_{10} is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R_{11} is hydrogen, hydroxyl or protected hydroxyl;

X is absent or is O, NH, N-alkyl, CH_2 or S;

Y is CHR_{17} , O, C=O, CR_{17} or NR_{17} ; and Z is CHR_{18} , O, C=O, CR_{18} or NR_{18} , wherein each occurrence of R_{17} and R_{18} is independently hydrogen or C_{1-6} alkyl, or R_{17} and R_{18} taken together is -O-, - CH_2 - or - NR_{19} -, wherein R_{19} is hydrogen or C_{1-6} alkyl, and Y and Z may be connected by a single or double bond; and

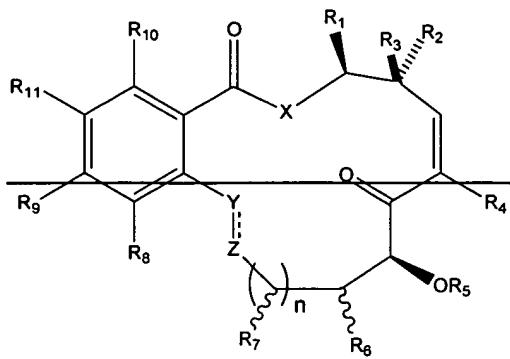
a pharmaceutically acceptable carrier;

wherein the compound is present in an amount effective to prevent or treat UVB-induced photodamage.

82. **(Original)** The pharmaceutical composition of claim 81, further comprising a cosmetic ingredient.

83. **(Original)** The pharmaceutical composition of claim 82, wherein the cosmetic ingredient is a sunscreen.

84. **(Currently Amended)** A method for treating an inflammatory and/or autoimmune disorder or a disorder resulting from increased angiogenesis and/or cell proliferation comprising: administering to a subject in need thereof a therapeutically effective amount of a compound ~~having the structure:~~ of any one of claims 1, 9 and 15;



(I)

~~or pharmaceutically acceptable salt, ester, or salt of ester thereof;~~

~~wherein R₁ is hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl;~~

~~R₂ and R₃ are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, or an aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl moiety; or~~

~~R₄ and R₂, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms; or~~

~~R₄ and R₃, when taken together, may form a substituted or unsubstituted, saturated or unsaturated cyclic ring of 3 to 8 carbon atoms;~~

~~R₄ is hydrogen or halogen;~~

~~R₅ is hydrogen, an oxygen protecting group or a prodrug;~~

~~R₆ is hydrogen, hydroxyl, or protected hydroxyl;~~

~~n is 0-2;~~

~~R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;~~

~~R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkoxy, or an aliphatic moiety optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;~~

~~R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, X₁(CH₂)_pX₂R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or X₁(CH₂)_pX₂R₁₄;~~

wherein R_{12} and R_{13} are, independently for each occurrence, hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl; or a protecting group, or R_{12} and R_{13} , taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R_{12} and R_{13} are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

wherein X_1 and X_2 are each independently absent, or are oxygen, NH, or N(alkyl), or wherein X_2 - R_{14} together are N₃ or are a saturated or unsaturated heterocyclic moiety;

p is 2-10, and

R_{14} is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is $(C=O)NHR_{15}$, $(C=O)OR_{15}$, or $(C=O)R_{15}$, wherein each occurrence of R_{15} is independently hydrogen, aliphatic, heteroaliphatic, alicyclic, heteroalicyclic, aryl or heteroaryl; or R_{14} is $SO_2(R_{16})$, wherein R_{16} is an aliphatic moiety, wherein one or more of R_{14} , R_{15} , or R_{16} are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R_8 and R_9 may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R_{10} is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

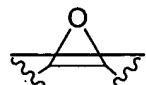
R_{11} is hydrogen, hydroxyl or protected hydroxyl;

X is absent or is O, NH, N-alkyl, CH₂ or S;

Y is CHR_{17} , O, C=O, CR₁₇ or NR₁₇; and Z is CHR_{18} , O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R_{17} and R_{18} is independently hydrogen or aliphatic, or R_{17} and R_{18} taken together is O, CH₂ or NR₁₉, wherein R_{19} is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond; and

a pharmaceutically acceptable carrier or diluent;

~~with the proviso that when n is 1; X is O; R₄ is methyl; R₂, R₃, R₇ and R₁₁ are each hydrogen; R₅ is hydrogen, C₁₋₄alkyl or C(=O)C₁₋₄alkyl; R₆ is hydrogen, OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and R₉ is OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; then one or more if the following groups do not occur simultaneously as defined:~~

- (i) ~~R₄ is hydrogen; R₁₀ and R₈ are independently OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y Z is CH₂CH₂ or CH=CH; and~~
- (ii) ~~R₄ and R₈ are each hydrogen; R₁₀ is OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y Z is~~

~~CHR^YCHR^Z, CH=CH or ; wherein R^Y and R^Z are independently hydrogen, C₁₋₄alkyl or C₁₋₄alkanoyl; and~~
- (iii) ~~R₄ and R₁₀ are each hydrogen, OH, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; R₈ is hydrogen, OH, halogen, C₁₋₄alkoxy or OC(=O)C₁₋₄alkyl; and Y Z is CH₂CH₂, CH=CH or C(=O)CH₂; whereby the compound induces mRNA degradation and the method is for treating a disorder resulting from cell proliferation.~~

85. (Original) The method of claim 84, wherein the method is for treating a disorder selected from the group consisting of rheumatoid arthritis, psoriasis, asthma, cancer, sepsis, inflammatory bowel disease, atopic dermatitis, Crohn's disease, and autoimmune disorders.

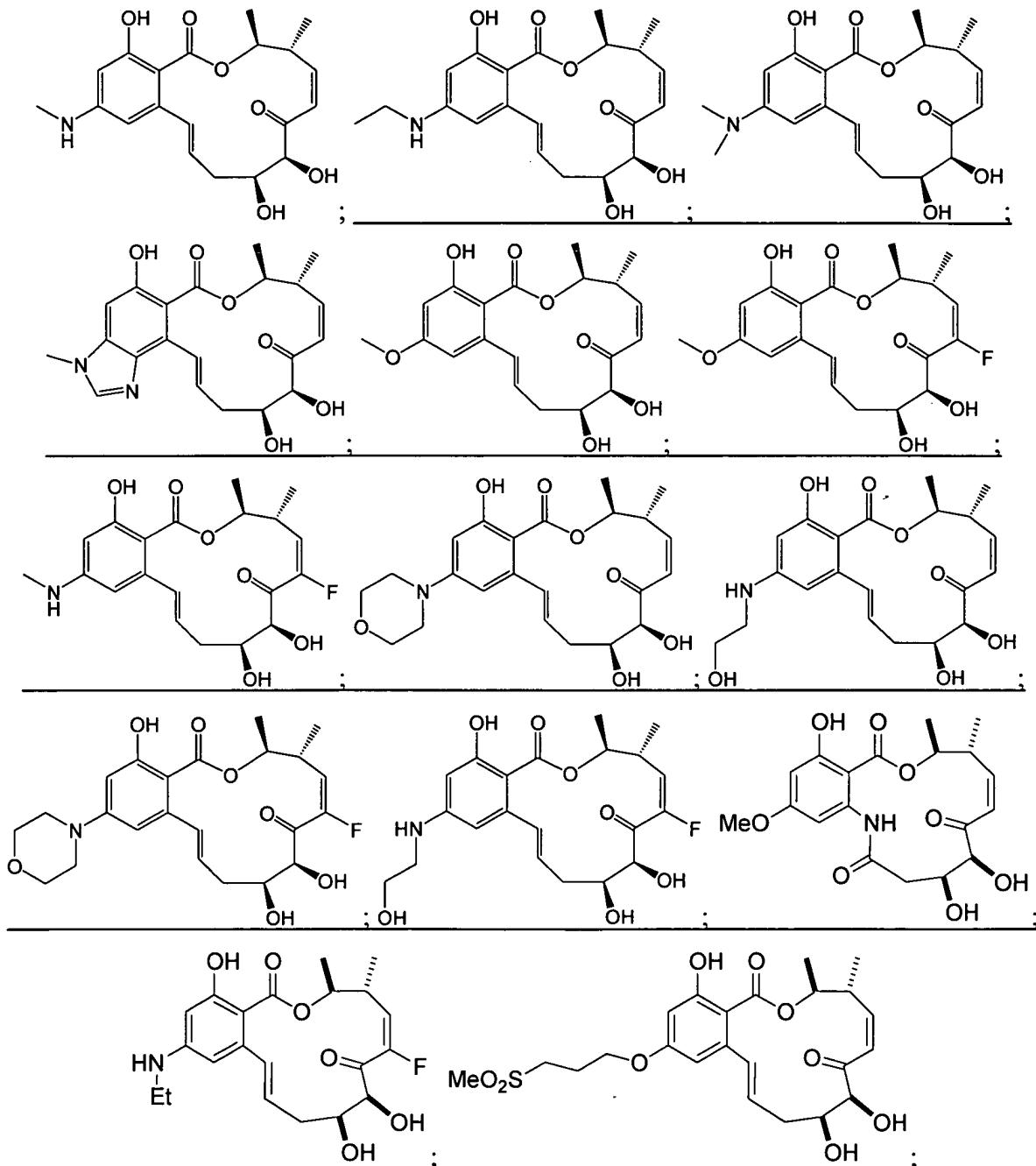
86. (Original) The method of claim 84, wherein the method is for treating rheumatoid arthritis.

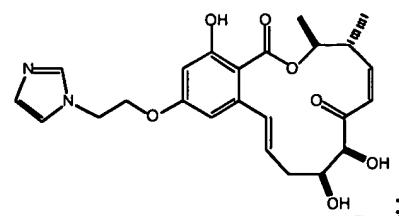
87. (Original) The method of claim 84, wherein the method is for treating psoriasis.

88. (Original) The method of claim 84, wherein the method is for treating asthma.

Claims 89-107 (Cancelled)

108. (Currently Amended) The method of claim 84, comprising administering a compound having wherein the compound has the structure:



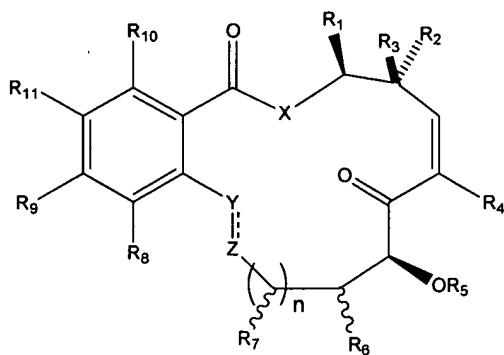


or pharmaceutically acceptable salt, ester, or salt of ester thereof.

Claims 109-118 (Cancelled)

119. (Currently Amended) A method for providing protection against UVB-induced photodamage to a subject, said method comprising:

Administering to the subject in need thereof a composition comprising a compound having the structure:



(I)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein **R₁** is hydrogen, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl;

R₂ and **R₃** are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl; or

R₁ and R₂, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen; or

R₁ and R₃, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen;

R₄ is hydrogen or halogen;

R₅ is ~~hydrogen or a protecting group~~ hydrogen, an oxygen protecting group or a prodrug moiety;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, C₁₋₆alkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R_{14} is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is $-(C=O)NHR_{15}$, $-(C=O)OR_{15}$, or $-(C=O)R_{15}$, wherein each occurrence of R_{15} is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or R_{14} is $-SO_2(R_{16})$, wherein R_{16} is an alkyl moiety, wherein one or more of R_{14} , R_{15} , or R_{16} are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R_8 and R_9 may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R_{10} is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R_{11} is hydrogen, hydroxyl or protected hydroxyl;

X is absent or is O, NH, N-alkyl, CH_2 or S;

Y is CHR_{17} , O, C=O, CR₁₇ or NR₁₇; and Z is CHR_{18} , O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R_{17} and R_{18} is independently hydrogen or C₁₋₆alkyl, or R_{17} and R_{18} taken together is $-O-$, $-CH_2-$ or $-NR_{19}-$, wherein R_{19} is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond; and

a pharmaceutically acceptable carrier or diluent.

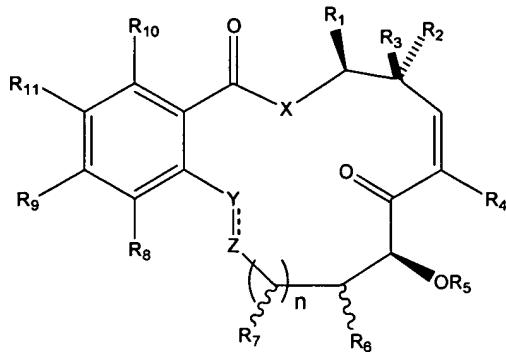
120. **(Original)** The method of claim 119, wherein in the step of administering, the composition is administered topically.

121. **(Original)** The method of claim 119, wherein the photodamage is skin wrinkles.

122. **(Original)** The method of claim 119, wherein the photodamage is a skin cancer.

123. **(Currently Amended)** A method for preventing or reducing the rate of restenosis, comprising:

inserting a stent into an obstructed blood vessel, the stent having a generally tubular structure, the surface of the structure being coated with (or otherwise adapted to release) a composition comprising a compound having the structure:



(I)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein R_1 is hydrogen, straight or branched C_{1-6} alkyl, straight or branched C_{1-6} heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl;

R_2 and R_3 are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, straight or branched C_{1-6} alkyl, straight or branched C_{1-6} heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl; or

R_1 and R_2 , when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen; or

R_1 and R_3 , when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen;

R_4 is hydrogen or halogen;

R_5 is ~~hydrogen or a protecting group~~ hydrogen, an oxygen protecting group or a prodrug moiety;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, C₁₋₆alkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is -(C=O)NHR₁₅ -(C=O)OR₁₅, or -(C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or R₁₄ is -SO₂(R₁₆), wherein R₁₆ is an alkyl moiety, wherein one or more of R₁₄, R₁₅, or R₁₆ are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R₈ and R₉ may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R₁₀ is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R₁₁ is hydrogen, hydroxyl or protected hydroxyl;

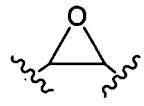
X is absent or is O, NH, N-alkyl, CH₂ or S;

Y is CHR₁₇, O, C=O, CR₁₇ or NR₁₇; and **Z** is CHR₁₈, O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R₁₇ and R₁₈ is independently hydrogen or C₁₋₆alkyl, or R₁₇ and R₁₈ taken together is -O-, -CH₂- or -NR₁₉-, wherein R₁₉ is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond; and optionally

a pharmaceutically acceptable carrier or diluent;

such that the obstruction is eliminated and the composition is delivered in amounts effective to prevent or reduce the rate of restenosis;

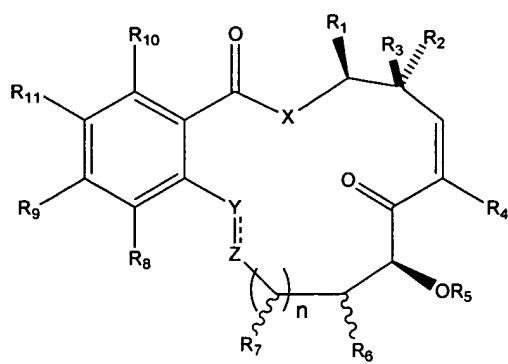
with the proviso that the following groups do not occur simultaneously as defined: n is 1; X is O; R₁ is methyl; R₂, R₃, R₄, R₇, R₈ and R₁₁ are each hydrogen; R₅ is hydrogen, C₁₋₄alkyl or -C(=O)C₁₋₄alkyl; R₆ is hydrogen, OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; R₉ and R₁₀ are independently OH, C₁₋₄alkoxy or -OC(=O)C₁₋₄alkyl; and Y-Z is -CHR^YCHR^Z-, -CH=CH- or



; wherein R^Y and R^Z are independently hydrogen, C₁₋₄alkyl or C₁₋₄alkanoyl.

124. **(Currently Amended)** A method for expanding the lumen of a body passageway, comprising:

inserting a stent into the passageway, the stent having a generally tubular structure, the surface of the structure being coated with (or otherwise adapted to release) a composition comprising a compound having the structure:



(I)

or pharmaceutically acceptable salt, ester, or salt of ester thereof;

wherein **R₁** is hydrogen, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl-C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl;

R₂ and **R₃** are each independently hydrogen, halogen, hydroxyl, protected hydroxyl, straight or branched C₁₋₆alkyl, straight or branched C₁₋₆heteroalkyl, or aryl,

wherein the alkyl, heteroalkyl, and aryl groups may optionally be substituted with one or more occurrences of halogen, hydroxyl or protected hydroxyl; or

R₁ and **R₂**, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen; or

R₁ and **R₃**, when taken together, may form a saturated or unsaturated cyclic ring of 3 to 8 carbon atoms, optionally substituted with one or more occurrences of halogen;

R₄ is hydrogen or halogen;

R₅ is hydrogen or a protecting group;

R₆ is hydrogen, hydroxyl, or protected hydroxyl;

n is 0-2;

R₇, for each occurrence, is independently hydrogen, hydroxyl, or protected hydroxyl;

R₈ is hydrogen, halogen, hydroxyl, protected hydroxyl, alkyloxy, or C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, SR₁₂, or NR₁₂R₁₃;

R₉ is hydrogen, halogen, hydroxyl, protected hydroxyl, OR₁₂, SR₁₂, NR₁₂R₁₃, -X₁(CH₂)_pX₂-R₁₄, or is C₁₋₆alkyl optionally substituted with hydroxyl, protected hydroxyl, halogen, amino, protected amino, or -X₁(CH₂)_pX₂-R₁₄;

wherein R₁₂ and R₁₃ are, independently for each occurrence, hydrogen, C₁₋₆alkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or a protecting group, or R₁₂ and R₁₃, taken together may form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms, and each of R₁₂ and R₁₃ are optionally further substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen,

wherein X₁ and X₂ are each independently absent, or are oxygen, NH, or -N(alkyl), or wherein X₂-R₁₄ together are N₃ or are a saturated or unsaturated heterocyclic moiety,

p is 2-10, and

R₁₄ is hydrogen, or an aryl, heteroaryl, alkylaryl, or alkylheteroaryl moiety, or is -(C=O)NHR₁₅ -(C=O)OR₁₅, or -(C=O)R₁₅, wherein each occurrence of R₁₅ is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, or alkylheteroaryl, or R₁₄ is -SO₂(R₁₆), wherein R₁₆ is an alkyl moiety, wherein one or more of R₁₄, R₁₅, or R₁₆ are optionally substituted with one or more occurrences of hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen; or

R₈ and R₉ may, when taken together, form a saturated or unsaturated cyclic ring containing 1 to 4 carbon atoms and 1 to 3 nitrogen or oxygen atoms and is optionally substituted with hydroxyl, protected hydroxyl, alkyloxy, amino, protected amino, alkylamino, aminoalkyl, or halogen;

R₁₀ is hydrogen, hydroxyl, protected hydroxyl, amino, or protected amino;

R₁₁ is hydrogen, hydroxyl or protected hydroxyl;

X is absent or is O, NH, N-alkyl, CH₂ or S;

Y is CHR₁₇, O, C=O, CR₁₇ or NR₁₇; and **Z** is CHR₁₈, O, C=O, CR₁₈ or NR₁₈, wherein each occurrence of R₁₇ and R₁₈ is independently hydrogen or C₁₋₆alkyl, or R₁₇ and R₁₈ taken

together is -O-, -CH₂- or -NR₁₉-, wherein R₁₉ is hydrogen or C₁₋₆alkyl, and Y and Z may be connected by a single or double bond; and optionally

a pharmaceutically acceptable carrier or diluent;
such that the passageway is expanded.

125. **(Original)** The method of claim 124, wherein the lumen of a body passageway is expanded in order to eliminate a biliary, gastrointestinal, esophageal, tracheal/bronchial, urethral and/or vascular obstruction.

126. **(Original)** The method of claim 125, wherein the lumen of a body passageway is expanded in order to eliminate a vascular obstruction.